



Global Strategy

IMPROVING AGRICULTURAL AND RURAL STATISTICS

IN ASIA PACIFIC



Improving Reliability of the Administrative Crop Reporting Systems

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Regional Office for the Asia-Pacific
Regional Action Plan to Improve Agricultural and Rural Statistics



Food and Agriculture
Organization of the
United Nations



Presentation Outline

- Importance of Administrative Reporting System for M/o Agriculture and for SDG monitoring
- Global Strategy focus on ARS
- Main findings of the GS Technical Report on ARS
- ARS in Sri Lanka and Lao PDR
- Approaches to improve ARS
- Key Conclusions/Recommendations



Importance of ARS

- A large number of countries depend on ARS for monitoring crop condition and livestock health
 - MOA are themselves main users and producers of data.
 - Data is available for decision making on almost real time basis
 - Simple to understand and compile with least cost.
 - The extension worker has the field knowledge to collect and report data
 - Information can be collected and/or is available for all units at the lowest administrative unit level
- SDG monitoring will require disaggregated data at lower levels. ARS is ideally suited to provide details at that level



Main Issues with ARS in Agriculture sector

- Non-verifiability of data
 - Reporting agent (extension worker) and the unit for which data is collected (land holding/farmer) is not the same
- In-consistency between different sources
 - MOA and NSO both collect data on same theme in some countries
- Data availability and quality found to be declining over time due to various reasons
 - Multifarious responsibility
- Increasing mechanization leads to shorter time window for harvest and less time for organizing CCEs
- Increasing non-response impacting quality of data



Comparison of ARS and Survey System (SS)

ARS	Survey System
ARS is relatively inexpensive	is expensive
ARS is quick to produce results; Ex ante	Slow to produce results: Ex post
Seldom available at household level; <i>household or individual level analysis not possible with ARS</i>	Can be available at household and person level
Errors not estimable in ARS;	Possible if probability sampling used; <i>not all SS surveys use probability samples; and even when they do, errors not always computed/published.</i>
ARS integrated with political system <i>loss of independence/objectivity,</i>	<i>Less room for pandering, revision, “subjective intervention”.</i>
Comparability and Consistency: <i>Some LGUs tend to stray from uniform standards</i>	<i>Standards, concepts and definitions set by NSS;</i>

Global Strategy focus on ARS

- Given the wide spread use of ARS, GS has identified improving ARS as one of important research item at Global Level
- Work in progress on two draft reports on ARS
 - Literature Review to improve quality and use of administrative data
 - Technical Report to improve quality and use of administrative data
 - Reports to be published by Sep 2016
- Main Conclusions
 - In developing countries, major issue is quality (subjective data collection when reporting against the program targets)
 - In developed countries, ARS data quality is good and many countries moving from SS approach to use of ARS (Denmark, Finland –Register based censuses)
 - Benefits from ARS are not automatic and strategies may be needed to handle challenges of definition of units, classification and coding systems etc
 - Purpose underlying administrative source may differ from the purpose of statistical agency leading to under coverage in some aspects
 - Given the limited budget for sample surveys, pressure on NSOs to use non-statistical sources of data (ARS, Big data, satellite data)



Improving ARS of Lao PDR

Issues

- Village headman responsible for reporting data . No documentation exists on operational data collection procedures.
- Some times data is reported informally at weekly commune meetings
- Potential biases in the data reported because of administrative factors;

Strategy

- Instructions Manual for the village head on how to collect/report data and coordination with other data collection/reporting activities
- Need to systematize the data collection and preparing of documentation
 - on how the system operates,
 - what data are to be collected/reported,
 - the use of standard questionnaires and statistical reporting forms;
 - a timetable for data collection and reporting, and
 - the responsibilities of the various parties involved in the reporting operation;
- the need for statistical concepts to be defined and applied in the data reporting operation;
- improving the transmission of data from one level to the next;
- Suggesting mechanisms to control and supervise the data reporting at all levels;

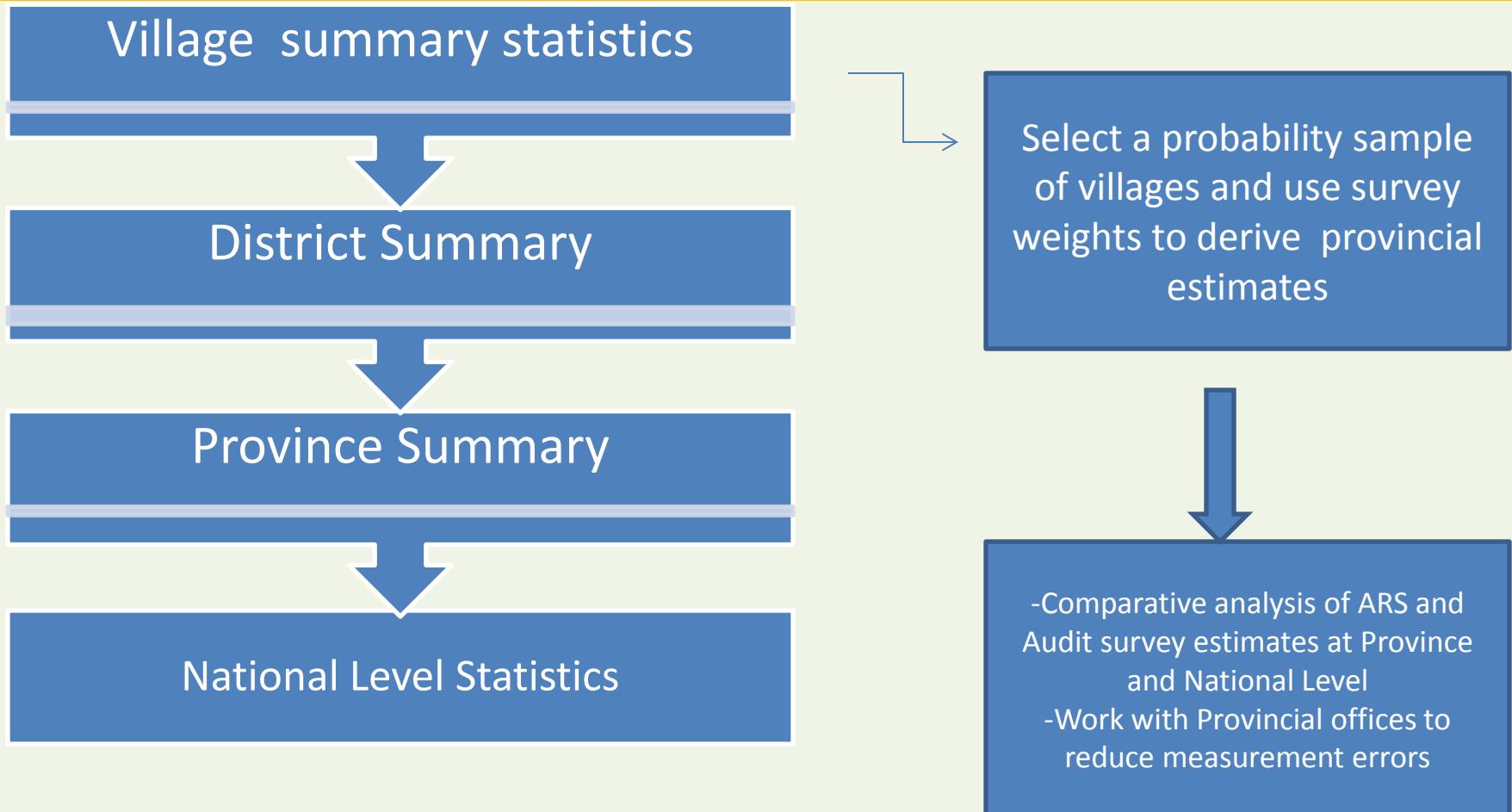


Two pronged Approach for Improving ARS of Lao PDR

- Improving Operation procedures (Global Strategy)
 - Evaluate and document existing procedures.
 - Develop and document improved administrative reporting methodologies
 - Train staff in a pilot district.
 - Implement new system in pilot district
- Use audit Sampling to generate national and provincial estimates (ADB)
 - Conduct an audit survey (in about 10% sample villages) which is similar to post enumeration surveys for evaluating measurements surveys in complete enumeration process
 - Apply uniform concepts and definitions
 - Design and implement a standard questionnaire
 - Training of respondents and key informants in sampled villages
 - Comparative analysis of ARS and Audit survey results

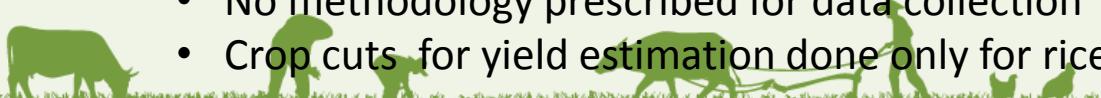


Improving ARS through Audit Sampling



Improving ARS in Sri Lanka: Issues

- Coordination Issues
 - Agricultural Research and Production Assistants (ARPAs) under M/o Agrarian Development report crop and livestock statistics.
 - There are 3 agencies involved with crop statistics (MOA, NSO and M/o Agrarian Development). There are issues of coordination between agencies at sub-national and national level
 - Quality of data is unknown
 - For livestock, two agencies responsible (NSO and Department of Animal Production and Health)and there are issues of conflicting livestock statistics
- Methodological Issues
 - Separate data collection system for rice and other crops
 - Data is based on the observation of field staff and discussion with farmers but no objective measurements are taken.
 - Often land records on the area cultivated are not available with farmers.
 - For rice crop, separate listing of farmers to compile are planted to rice. Chances of over reporting due to subsidy element
 - For other crops, a booklet is maintained which is updated by ARPA based on his own subjective assessment on crop area coverage (about 60 crops) and livestock numbers.
 - No methodology prescribed for data collection
 - Crop cuts for yield estimation done only for rice crop.



Global Strategy Approach for the ARS in Sri Lanka

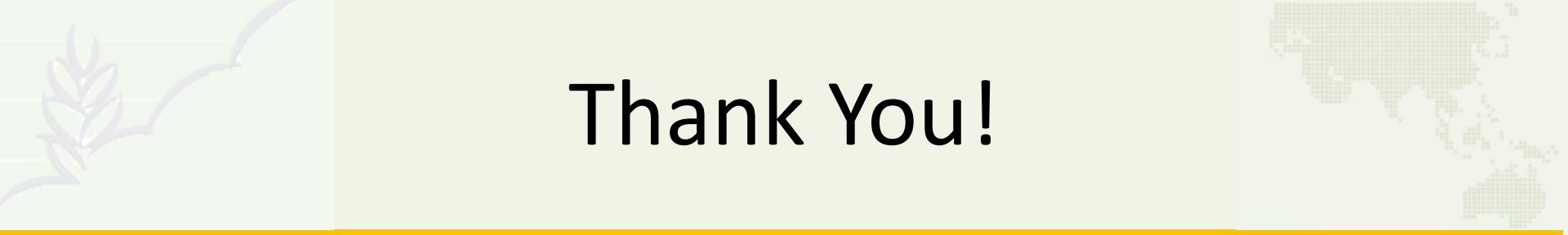
- Two Pilot Surveys in progress
- Methodological Improvements on Rice crop methodology
 - Review the number of CCEs vis a vis Standard errors achieved and suggest optimal sample size
 - Use of sample surveys to estimate rice area coverage and using GPS technology
 - Mechanization leading to loss of CCEs. Alternative methods such as Farmer's recall, farmer's assessment, whole field harvest being explored
- Developing methodology for Highland crops (Maize, Big Onion, Potato and green Chillies)
 - Sample surveys approach proposed for area estimation in a sample of 20% villages. In 5 years all villages to be covered
 - Limited number of CCEs proposed for these crops



Way forward

- Global Strategy recognizes the issues impacting ARS and is working to develop approaches for improving and strengthening ARS
- Countries also recognize the problem and are willing to invest in improving this data source
- Increasing use of alternative independent sources for validating ARS data such as satellite imagery, crop forecasting, agro-met modelling
- Digitization of Land records (sampling framers) could enhance the quality of data from ARS as area figures will become more precise
- Use of small area methods to improve the precision of lower level estimates from ARS (conditions apply)





Thank You!

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